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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,790	06/26/2003	Won-Seok Kang	053785-5118	3470

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EXAMINER

TON, MINH TOAN T

ART UNIT PAPER NUMBER

2871

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/603,790

Applicant(s)

KANG, WON-SEOK

Examiner

Toan Ton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/30/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,18 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,18 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-9, 18 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeong et al (US 2004/0021816) in view of Fujimori et al (US 5771084) and Yamada et al (US 5751382).

Jeong discloses a reflective liquid crystal display device comprising (see at least Figure 5): a substrate having first and second pixel regions; a gate line on the substrate; a data line crossing the gate line and defining the pixel regions; a thin film transistor connected to the gate line and the data line, wherein the thin film transistor (inherently) comprises a gate electrode, an active layer, and source and drain electrodes; at least first and second reflective electrodes over the thin film transistor, wherein the first and second reflective electrodes are separated from each other by a first gap, the first and second reflective electrodes are located at the first and second pixel regions, respectively, and completely cover the data line at the pixel regions; the data line between the first and second pixel regions includes a first branch line and a second branch line separated each other by a second gap under a first gap (see at least Figure 5); the first and second reflective electrodes cover the first and second branch lines, respectively.

Jeong discloses the pixel electrode connected to the drain electrode, the gate electrode connected to the gate line, and the source electrode connected to the data line.

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Jeong discloses the reflective electrode(s) formed of a material such as Al, Ag.

Jeong discloses the reflective electrodes having an uneven surface.

Jeong discloses the first gap being equal to or smaller than a second gap (see Figure 5).

The limitation not explicitly disclosed by Jeong is a spacer filling between the reflective electrodes. However, the use of a spacer filling between the reflective electrodes is common and known in the art for achieving advantages such as constant cell gap (see at least Yamada and Fujimori). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a spacer filling between the reflective electrodes, as common and known in the art, for achieving advantages such as constant cell gap.

The use of a negative photoresist material for the spacer is common and known in the art for achieving advantages such as high transmittance, lower refractive index. Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ a negative photoresist material for the spacer, as common and known in the art, for achieving advantages such as high transmittance and lower refractive index.

The spacer(s) is commonly disposed in non-displaying regions (black matrix regions), wherein non-displaying regions commonly include light-blocking material for achieving advantages such as high contrast. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the spacer including a black material (opaque) for achieving advantages such as high contrast.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 3 and 18 and its dependent claims have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-2, 4-9, 18 and 21-23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-38 of copending Application No. 10/420786 in view of Fujimori et al (US 5771084) and Yamada et al (US 5751382).

The present claimed invention and the claims of the copending Application No. 10/420786 recites a reflective liquid crystal display device comprising a substrate, first and second pixel regions; a gate line, data line crossing the gate line, a thin film transistor connected to the gate line and the data line, at least first and second reflective electrodes over the thin film transistor, the first and second reflective electrodes are separated from each other by a first gap, the data line between the first and second pixel regions includes a first branch line and a second branch line separated each other by a second gap under a first gap, the first and second reflective electrodes cover the first and second branch lines, respectively.

The limitation not explicitly claimed by the copending application is a spacer filling between the reflective electrodes. However, the use of a spacer filling between the reflective electrodes is common and known in the art for achieving advantages such as constant cell gap (see at least Yamada and Fujimori). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a spacer filling between the

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reflective electrodes, as common and known in the art, for achieving advantages such as constant cell gap.

This is a provisional obviousness-type double patenting rejection.

Conclusion

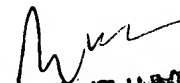
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 24, 2006


TOAN TON
PRIMARY EXAMINER